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EXAMINER
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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* YAOGEN GE

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Appeal 2011-010636  
Application 11/120,720  
Technology Center 3700

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Before EDWARD A. BROWN, MICHAEL L. HOELTER, and  
MITCHELL G. WEATHERLY, *Administrative Patent Judges*.

BROWN, *Administrative Patent Judge*.

DECISION ON APPEAL

### STATEMENT OF THE CASE

Yaogen Ge (Appellant) appeals under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1-5, 9, 16, 18-24, 28, and 29. Br. 5. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

### CLAIMED SUBJECT MATTER

Claims 1, 16, and 28 are independent. Claim 1 is illustrative and reads:

1. A spinner assembly for threading or unthreading substantially vertical oilfield tubular members above a floor at a well site, comprising:

a spinner housing having an open throat for receiving a tubular member therein, said spinner housing having a common axis;

a plurality of rollers rotatable about a substantially vertical axis and adapted to engage said tubular member positioned within said throat;

a plurality of motors for rotating the rollers;

a plurality of driving shafts, each driving shaft being connected to one of said plurality of motors and having an elongated portion of polygonal shape in cross section,

a pair of substantially coaxial, opposing brackets supporting the rollers and motors and disposed within said spinner housing on opposite sides of said throat, said brackets being movable within said spinner housing in a direction towards and away from said throat, wherein said brackets and rollers move in and out of the spinner housing in opposite directions in a substantially straight line along said common axis;

a pair of actuators disposed within said spinner housing on opposite sides of said throat,

each actuator including a first end connected to said spinner housing and a second end attached to one of said brackets for moving said brackets and rollers along said common axis;

each of said plurality of rotatable rollers having a central polygonal passageway for directly mating with one of said driving shafts;

each roller having two or more axially spaced cylindrical portions, a lower surface of an upper cylindrical portion spaced above an upper surface of a lower cylindrical portion;

each cylindrical portion having a plurality of arcuate members each having a partially cylindrical exterior surface and end surfaces spaced adjacent ends of a respective exterior surface, each end surface of each arcuate member being in planar engagement with an end surface of an adjoining arcuate member, and the end surfaces of the upper cylindrical portion being circumferentially offset from the end surfaces of the adjoining lower cylindrical portion; and

each roller having a plurality of fasteners each extending between and interconnecting the two or more axially spaced cylindrical portions, wherein each arcuate member can be removed from the spinner assembly by removing only a plurality of fasteners, without removing any other component except the roller's each arcuate member itself.

## REJECTIONS

Claims 1-5 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Belik '502 (US 7,000,502 B2; issued Feb. 21, 2006) in view of, or as evidenced by, Belik '845 (US 6,253,845 B1; issued Jul. 3,

2001), and further in view of Junck (US 6,276,238 B1; issued Aug. 21, 2001) and Beier (US 6,510,762 B1; issued Jan. 28, 2003).

Claims 16 and 18-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Belik '502 in view of, or as evidenced by, Belik '845, and further in view of Beier.

Claims 28 and 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Belik '502 in view of, or as evidenced by, Belik '845, and further in view of Junck.

### ANALYSIS

#### *Rejection of claims 1-5 and 9 — Belik '502, Belik '845, Junck, and Beier*

Belik '502 discloses a drill pipe spinner including clamping arms 15, 20, which are pivotally connected to each other by an arm pin 25. Belik '502, col. 3, ll. 27-30; fig. 1. Roller brackets 30, 35 are connected to the distal ends of clamping arms 15, 20 by roller bracket pins 40, 45. *Id.* at col. 3, ll. 41-45; fig. 1. Each of the roller brackets 30, 35 includes a pair of drive roller assemblies. *Id.* at col. 3, ll. 45-47; fig. 1. The roller bracket pins 40, 45 are removable to allow the roller brackets 30, 35 and their associated drive roller assemblies to be removed from clamping arms 15, 20. *Id.* at col. 2, ll. 31-46. The clamping arms 15, 20 are pivotal about the arm pin 25 from an open position (fig. 3A) to a closed position (fig. 3B) to engage with a drill pipe disposed between the drive roller assemblies. The rollers 85 of the drive roller assemblies are driven to rotate the drill pipe (*id.* at col. 4, ll. 1-2; fig. 1) to make up or break out the pipe (*id.* at col. 3, ll. 30-34).

Junck discloses a rotating vise including opposed jaw assemblies 25, which are moved toward and away from each other by hydraulic cylinders

32 and pistons 30. Junck, col. 3, ll. 30-33; fig. 1. The jaw assemblies 25 are also rotated by a hydraulic cylinder 15 and piston 14. *Id.* at col. 3, ll. 12-17; *compare* figs. 1 and 2. The vise is used to break joints in a drill string. *Id.* at col. 1, l. 65 – col. 2, l. 6.

Regarding claim 1, the Examiner found that Belik '502 discloses the claimed spinner assembly except for “a pair of substantially coaxial, opposing brackets” and “a pair of actuators.” Ans. 3-5. The Examiner found that Junck teaches substantially coaxial, opposing brackets 25 and a pair of actuators 32 having the claimed features, and concluded that it would have been obvious to modify the Belik '502 brackets 15, 20 (clamping arms) (*see* Ans. 4) with Junck's brackets and actuators to result in movable brackets that allow different sized tubular members to be more easily and effectively secured between them (*id.* at 5-6).

Appellant contends that the Examiner did not clarify how the Belik '502 spinner would be modified in view of Junck. Br. 15-16. In response, the Examiner explained that the combination would attach the roller supporters 30, 35 (roller brackets) of Belik '502 to the brackets (25) of Junck. Ans. 14. The Examiner also stated that the combination could still have the quick release mechanism 40 of Belik '502 (*id.* at 14; *see also id.* at 15), “while providing brackets that move substantially along a straight line *instead of* providing pivotal brackets (15 and 20) [clamping arms], as shown in Belik” (*id.* at 14; *emphasis added*). Accordingly, we understand that the Examiner's combination would result in Belik '502's clamping arms 15, 20 being unable to pivot, and in Belik '502's roller brackets 30, 35 being able to move only substantially along a straight line.

Appellant contends that one skilled in the art would have had no reason to look to Junck's rotating vise to improve or enhance the functioning of Belik '502's spinner, because the vise and spinner have such different structures and functions. Br. 17-18. We agree. Moreover, even if one skilled in the art were to have looked to Junck, the Examiner's stated motivation for the combination—that it would allow different sized tubular members to *more easily and effectively* be engaged to outer surfaces of the rollers by actuation of the brackets—is speculative. This is because Belik '502's clamping arms 15, 20 are pivotable from an open position to a closed position to engage with a drill pipe, and thus, Belik '502's spinner is already usable with different-sized pipes by varying the amount of pivoting of the clamping arms 15, 20. The Examiner has not explained why Belik '502's spinner is inadequate, or how the modification that would eliminate pivoting of the clamping arms 15, 20 would result in the spinner being able to be used with a greater range of pipe sizes than is already achievable by the pivotable clamping arms 15, 25. Thus, the Examiner has not articulated an adequate reason with a rational underpinning as to why one skilled in the art would have substantially modified Belik '502 in this manner. Therefore, we do not sustain the rejection of claim 1, and its dependent claims 2-5 and 9.

*Rejection of claims 16 and 18-24 — Belik '502, Belik '845, and Beier*

*Claims 16 and 18-22*

Claim 16 is directed to a “*coreless* roller for a spinner assembly,” and requires that “each cylindrical portion hav[e] a central polygonal passageway for *directly mating with a driving shaft*” and “each arcuate member within the entire roller is interconnected to each other to form a

*complete roller without a central support member.”* Claims App’x.  
(emphasis added).

Appellant points out that claim 16 requires a “coreless” roller and a “roller without a central support member” (Br. 20), whereas Figures 1 and 9 of Belik ’845 illustrate rollers that include core elements (*id.* at 20-22). As to Figure 1, Appellant cites to disclosure in Belik ’845 that describes that the roller 10 includes a core member 12. *Id.* at 21; *see* Belik ’845, col. 5, ll. 12-20. As to Figure 9, Appellant cites to disclosure in Belik ’845 that describes that the roller 200 includes a core member 202, a first core member 206, and a second core member 208. *Id.* at 22; *see* Belik ’845, col. 10, ll. 37-49.

In response, the Examiner stated that element 12 in Belik ’845 is part of the drive shaft “since it directly attaches to drive shaft [80]” (Ans. 17 (citing Belik ’845, figs. 3, 4), and that “[b]y interpreting element (12) as being part of the drive shaft, rollers (10) includes various hollow or coreless segments (as seen in Figure 11a-11j)” (*id.*). The Examiner also stated “the core as argued by [Appellant] is being interpreted as meeting the structural limitations of the elongated portion of the driving shaft (see claim 1),” and that Appellant “merely renamed a core as being an elongated portion of a driving shaft.” *Id.*

We note that Figure 3 of Belik ’845 shows the roller 10 connected to the shaft 80 of motor 76 and to the shaft 86 of motor 82 to drive and rotate roller 10. Belik ’845, col. 7, ll. 31-40. The shaft 80 of motor 76 extends into the central aperture 32 of the core member 12 of roller 10. *Id.* at col. 7, ll. 33-35 and ll. 48-50; fig. 4. The central aperture 32 includes splines 60 which engage with mating splines on the motor shaft. *Id.* at col. 7, ll. 20-23; fig. 2. We further note that Figure 9 of Belik ’845 shows another



embodiment 200 of the roller including the stacked annular members 204.  
*Id.* at col. 10, ll. 37-40.

Based on the Examiner's statement that Appellant "merely renamed a core as being an elongated portion of a driving shaft," we understand that the Examiner construed "coreless roller" as excluding "an elongated portion of a driving shaft." Ans. 17. We further understand that the Examiner determined that Belik '845's roller 10 is a "coreless roller" for the reason that the core member 12 is not actually part of the roller 10, but rather is part of a drive shaft that drives the roller 10. *Id.*

We disagree with the Examiner's reasoning. Belik '845 explicitly describes the rollers 10, 200 as including respective core members 12, 202. The core members 12, 202 are integral elements of the rollers 10, 200. In addition, Belik '845 separately describes motor drive shafts for rotating the rollers. Belik '845 discloses that the splines 60 of the core member 12 engage with the drive shaft, not that the "cylindrical portions" of the roller 10 or 200 directly mate with a drive shaft. The core members 12, 202 are permanent "central support members" of the roller 10, 200, including when the roller is *not* mating with a drive shaft. Hence, the Examiner did not establish that Belik '845 discloses a "coreless roller," or the claim limitation reciting "each arcuate member within the entire roller is interconnected to each other to form a complete roller without a central support member."

The Examiner's application of Beier for the rejection of claim 16 (Ans. 9-10) does not cure the deficiencies of Belik '502 and Belik '845. Thus, we do not sustain the rejection of claim 16, and its dependent claims 18-22.

*Claims 23 and 24*

As discussed *supra*, the Examiner relied on the teachings of Junck to address deficiencies of Belik '502 for the rejection of claim 1. However, the Examiner did not rely on Junck for the rejection of claims 23 and 24, which depend from claim 1. *See* Ans. 11. Moreover, as discussed *supra*, Junck does not cure the deficiencies of Belik '502. Thus, we do not sustain the rejection of claims 23 and 24.

*Rejection of claims 28 and 29 — Belik '502, Belik '845, and Junck*

Claim 28 is directed to a spinner assembly comprising, *inter alia*, “a pair of brackets” having features similar to those of the brackets recited in claim 1. Hence, we do not sustain the rejection of claim 28, and its dependent claim 29, for reasons similar to those discussed *supra* for the rejection of claim 1.

DECISION

The Examiner's rejections of claims 1-5, 9, 16, 18-24, 28, and 29 are REVERSED.

REVERSED

Klh